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# BTOP Public Comments

*Docket number 0907141137-91375-05*



Sho-Me Technologies, LLC

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## I. Executive Summary

The effort put forth by the BIP and BTOP programs to bring broadband to rural America is to be applauded. There is a real need in every state to build new and improved networks that are easily obtainable and accessible by all who desire reliable services at affordable prices. Rural Americans have historically had to wait on advanced services as their remote locations contribute to normally being last in line, to settle on a lesser quality of services because of limited choices, and to typically pay higher prices for their lesser services because competition is rare.

This Broadband initiative is not only a consolidated effort to help bring much needed broadband choices to rural areas, but also for the much needed jobs and the economic growth and opportunities for families who want to live and work in rural areas.

The first round was ambitious and it did give very little time for applicants to put together their proposals, but with 2,200 projects it appears that the challenge was met, at least on the applicant side. The challenge now is for RUS and NTIA to make awards in a timely manner in order to kick start these projects and begin to realize some progress. The round one application process is now complete. Hopefully, the BIP and BTOP programs will take into account the recommendations made by each state as they seem to be closer to regional matters than what a federal perspective could be. But from a federal level, leadership should be demonstrated through assistance provided in all parts of rural America who are in need of help economically and technically. While the first round undergoes due diligence reviews and project award assignments, the nation waits for funds to be put back into the economy and for jobs to be reinstated. And, unlike DOE and the Smart Grid funding, since there will be two rounds instead of one, it does behoove applicants and the public to submit fresh ideas and comments on ways which suggest improving the process. Again, RUS and NTIA are to be applauded for wanting to do the right thing in listening to the voice of the public.

The key issues in these comments deal with how the public sees the incumbent or existing service provider. It also deals with how the incumbents see themselves. If most areas are going to be debated that they are served already, then there is no need for a broadband stimulus. But the truth of the matter is that there is a service provider of some sort in any given area and they do not want competition. The BIP and BTOP programs should confront and resolve those defenses in order that rural Americans can have a fighting chance in saving their communities from those who would want to keep them from having the same services found in the urban areas.

## II. Public Notice Filings

The process which allows existing broadband service providers to comment on the applicants' assertions that their proposed funded service areas are unserved or underserved should be allowed, but with a condition. So as not to risk an application from being disqualified from funding on the basis of potentially misleading information submitted by existing broadband service providers, the condition should be that proof of service should be provided by the incumbent with more evidence than just a statement. The amount of effort the applicant goes through in order to create their design and substantiate their belief that an area warrants a new network should be given a priority consideration over an incumbent's statement to the contrary and the burden of proof should then move to the incumbent if they wish to disagree.

Single or simple statements representing "matter of fact" from an existing service provider can be misleading. Existing service providers do not want to jeopardize their service areas in such a way that it would open up competition and/or bring choice to their customers. Therefore, it's an easy way for them to discredit the proposal of an applicant on the basis that the service area proposed is already served. So, one way to establish an alternative verification method is to check with each State's planning team (if they have one established). In addition, the type of information which should be collected from the entity questioning the service area is to obtain a network map of the existing services which, for middle mile, should include the number of fibers installed and the number of fibers available to other providers. What you will find is that the majority of existing providers are not as neutral or "open access" minded as the applicant is required to be. The maps should also show where access is available, the age of the existing plant, and any obstacles for continuity through it. The network map should include geographical references in order to determine if the incumbent is truly providing service where the applicant is planning to provide service. Terms used by incumbents like "promised", "capable", "planned", "majority of its customers", etc. should be considered with little weight as these too can be misleading on the true situation.

If an incumbent wishes to protest an application during the Public Notice Filing period, they should be allowed to protest with a single entry. The larger carriers and affiliates end up saying the same thing over and over for multiple areas. They submit pages worth of duplicate grievances with no new information particulars. This makes for rhetoric submissions on their part and it would be much more useful if they would submit actual and verifiable evidence in one submission.

### III. State's Priority List

With contributing matching funds, the State governments definitely hold a strong opinion toward what should get approved since they will typically have a history of involvement with the various carriers, both existing and applicants. For the most part they seem to have basic needs which are similarly evidenced from other states. One of those needs is to ensure there is opportunity to provide reliable service from competitive service providers thus creating an economical choice for their members. Larger metro areas have this today, but smaller rural areas struggle with it.

Another need from the state's perspective is to ensure adequate and economic resources are available for schools and education. Add to that the need for government agencies to upgrade and expand their networks in order to run modernized applications which are used to ultimately serve the people. And, of course there's public safety and a real need to make sure critical infrastructure such as electric utilities have ample access to secured and speedy systems. If it comes down to a situation where life is on the line, speed can make all the difference.

The best way to leverage broadband infrastructure is to listen to the people who need it, not the people who think they provide it. Focusing funding on applicants with proven track records, who can demonstrate they are responsible and trustworthy, who can and have made a significant impact on civilization through their known efforts, and who have a genuine interest in doing what's right for the people is what the state planning teams seem to be doing. The reason they do so is because there's an economic and political interest in helping their state be successful in keeping residents and allowing families and businesses to prosper. With so much at stake, the states should be taking a vested interest and if they do, then BIP and BTOP should take a state's priority list and give it careful consideration.

Broadband has a place in every facet of life. Every industry relies on it more and more. Cellular phones have become as common as the radio. Broadband and the ability to communicate more quickly and accurately is what can drive an entity toward its acceptance. The state governments are no different. They have a need. They want an option. They deserve the best available resources now. And although both BIP and BTOP already look to the states for their priority recommendations, further discussions with the states, especially after the notice of public filings have been completed, should take place which will help provide validity and shore up the confidence displayed toward key applicants and their proposed designs.

#### IV. Underserved vs. Unserved

There is a lot of controversy over what is deemed served, underserved and unserved. However, the controversy stems from incumbents who are not interested in supporting the stimulus initiative and would rather keep competition at bay. They may argue that a territory is served if they have plans in the works to serve it. But plans by incumbents have a way of taking a long time to implement. And, they are still not subject to the open access policy that is placed on the new applicants. They may have a legitimate argument that they have invested time and money to build infrastructure which delivers some services to some of their customers, but how could anyone check the validity that 100% of their customers are being served as many of them suggest? It's when they say their systems are "capable" of providing broadband service to 100% of their customers throughout their territory that one needs to be concerned with how many such protests are going unexamined.

If an incumbent claims to have deployed broadband network within the service area defined by the applicant, does that mean the applicant's network deployment is therefore an unnecessary duplication? Wouldn't you need more of an explanation and supporting data to verify if indeed the two networks duplicate each other? Does a statement like this define an area as served?

If an existing service provider claims to have installed a state-of-the-art SONET OC 192 transport network connecting all communities together and offers a capacity of 10 Gigabits and that the communities are now served, does it stand to reason that if they offered 10 Gigabits of capacity to anyone, they could only do it once as there are only 10 Gigabits of capacity in an entire OC 192. It's a broad statement to mislead others into thinking there is plenty of capacity for everyone. But how much capacity is there really? If it's full, and there is no more for anyone else to use it, is the community still served or now would some of those community members be unserved? If the public says they cannot get the type of connectivity they need at the rates they can afford because of having to build a new OC 192 for the incumbent, isn't that a service issue? Plus, when statements like these are made that this type of network connects so many communities, just how much bandwidth do any of them really have? Is ten communities sharing an OC 192 system too much or too few? What about twenty communities sharing that pipe? It could be that even then, additional services are needed for those communities to thrive; otherwise they risk the fate of having to settle with whatever they can get. Too much of that sort of behavior has been pinned on rural America for too long. Rural America is last to get it and they have to settle with what they get.

## V. Focus

RUS and NTIA should focus on projects that will deliver middle mile infrastructure facilities into communities which will connect key anchor institutions within those communities. There was a real grey area in the first round of funding as to whether such connections were to be classified as middle mile or last mile. If it's to be considered last mile, then that opens up the whole block census data discussion on how much community data is required to distinguish whether the community is served, unserved or underserved. But if the key anchor institutions are limited with the type of services the incumbent can provide, or if the needs for those anchor sites are more than what's available, it's not right to prohibit an applicant into the area trying to reach those locations in need.

Community colleges, schools, libraries, health care facilities, and public safety organizations may reside in a community that could be considered served, but yet they themselves cannot receive affordable broadband at levels higher than the stimulus definition of broadband which they so desperately need. This is one of the largest areas of frustration for the middle mile applicants. Between any two urban areas will be a whole host of rural areas in need of services. That part is understood. But the end points of a middle mile span may reside in a town that is already served. In fact, both end points of any span could be in this situation. Taking it one step further, every end point on every middle mile span could be ingress and egress from within a served urban community. The communities in the middle are the targets for rural, underserved connectivity. But, another target is those key anchor institutions looking for accessible fiber network opportunities which still reside in the urban areas where the middle mile span enters and leaves. By allowing the middle mile applicant to go ahead and reach those institutions in the urban, served communities will be a huge asset to those organizations. It will ensure those anchor institutions have high-speed (not just broadband) connectivity to the Internet and their own private networks which would contribute to sustainable community growth and prosperity. It would be a travesty for all the stimulus funds to be spent, and yet schools, healthcare and public safety are still required to pay high fees for minimal services.

If you are able to find a middle mile applicant who has teamed up with last mile applicants, then you have a very good recipe for success right from the start. In those situations, priority attention should be given. But without a doubt, whether it's from middle mile or last mile applicants, attention to those focusing on education, health, economic development and public safety, especially in communities that may not have today, should be a priority.

## VI. Competition

Competition impacts cost effectiveness. The Public Notice Filings are showing that competition is a negative topic. If an existing service provider thinks they provide a broadband service in a rural community, and they say so, how does anyone know for sure whether the take rate for their service is what it should be? Maybe they do offer something, but maybe it's not the right price for the service offered. All they have to do is file a protest against an applicant and that application gets a black flag even though the new service could have meant the difference in take rate for that rural community.

There was a statement made in the RFI that extremely rural companies typically have much higher construction costs than more densely populated ones. If the costs are based on the number of households passed, then the answer is probably "yes". But, if the costs are based on actual construction costs per mile, then the answer is probably "no", unless you factor in the distance to get to a rural area, then you're back to "yes". But to build a mile of fiber in a rural Midwestern town is probably about a tenth of what it costs to build in a larger Midwestern metro area. But it may take ten times the distance to reach the rural town from the metro. There has to be connectivity. That's where the costs get high and the defenses displayed by incumbents rise. They don't want competition allowing open access in their "territory" even though they may not be providing service to that particular community. They still have a territory to guard.

Fiber construction is expensive, but the service is needed if our nation is going to move ahead in the broadband universe. Wireless and spectrum have their limitations, but fiber is the greatest technology to come close to handling the types of speeds users need today and tomorrow. Rural communities are last in line for fiber based services. That would be because there are fewer businesses able to pay the fees for getting fiber, especially if there are no choice options for them. So, the costs for rural areas, based on households and distance to get there, would make fiber higher than the metros. But competition can help this.

In order to keep unnecessary costs from being added to an applicant's project, you need a standard to reference. There are agencies such as NRECA, UTC, and others that have performed studies to determine realistic fiber construction costs. But the timing requirements set forth in the NOFA are going to have an impact on those costs. Since the stimulus expedites everything, and requires applicants to build out networks in a hurry, the costs will increase over the norm. Also, there will be a race to get product delivered from vendors as quickly as possible and this will increase pricing too. And finally, securing the rights-of-way in an expeditious manner will also add to the costs.

## VII. Job Creation and Long Term Economic Growth

The economic recession placed a hardship on many civilians through the loss of jobs for whatever economic reason which caused and employer to terminate employment. RUS and NTIA should not lose sight of the power these stimulus projects have in putting people back to work, especially contractors. Contractors have been hard hit whether they are construction contractors, maintenance contractors, employment contractors and even temporary contractors. The more time it takes to delay the awarding of projects, means the more time these folks are without work. The broadband stimulus breathes new hope in that new construction brings work. Large projects which propose putting larger numbers of people to work should be reviewed quickly. In rural areas, the community “buy-in” is already there. They need the work, they need the services, and they need the draw of economic development programs based around high-speed fiber optics to bring and keep businesses in their community.

The RUS and NTIA should seek applications for projects which would systematically link broadband deployment to a variety of complementary economic actions such as smart grid which can also impact economic development in communities. Businesses need electricity and they need communications. Two services which can aid each other and work for the common good of everyone. Are there opportunities in applicant proposals where this is being addressed?

The jobs needed to construct a system are obvious. For a middle mile network there will be underground and overhead construction workers, cable and conduit manufacturing, fiber optic splicers and testing, environmental and right-of-way managers, concrete and delivery workers, warehousing and accounting personnel, public program managers and liaisons for working with municipalities, equipment vendors and technicians, building construction and carpenter workers, electricians and utility workers, engineers and safety supervisors, marketing, legal and much more required to install long haul backbone fiber optic systems. Many of these people that can do this work are found in the very communities where jobs have been lost in an effort to keep and retain workers in rural America before they leave to find work elsewhere. Last mile projects can target job creation in a specific community. Middle mile projects can target job creation in a multitude of communities.

Projects should be given a focus if jobs are provided to local people. If every state is to get an award, that award should go to the applicant who will hire people within that state. The way to help job creation and economic growth is to ensure the work and the funds make it to those needing the most help. Every state has them and more consideration should be given to those projects wanting to keep the work local.

## VIII. Mapping

A quick and easy way to get started with a nationwide mapping program could have started with the request that both applicants and Public Notice Filing protesters submit their entire systems, existing and planned, leased and owned, new and old. In addition to the maps, it's critical to note whether additional capacities exist or not for future services and if the systems are truly accessible or off limits. Understanding the continuity through the system would help to determine if the systems are indeed usable. Spending money to hire firms to prepare a mapping database is a good idea, but how eager will anyone be to provide that data to them unless there was a condition (i.e. must accompany an application or a protest). Otherwise, data like this is kept closely guarded and only the information the owner wants displayed is ever published on a website. The most important data is usually kept under lock and key with limited exposure.

For example, cannot imagine anyone wanting to submit data to a mapping contractor which tells them that from LOC A to LOC B they've installed 24 fibers and 24 are all in use. Not to mention, it is 15 years old and has had to be repaired on numerous occasions which means there are a lot of "lossy" splices now built in that could affect characterization results for anyone wanting to pump 10G data across it. On top of that, it's not even their fiber as they acquired it in an IRU transaction and they don't even maintain it themselves. The original owner of the cable who is responsible for maintenance does not allow access to it unless you plan to pay outrageous fees to tap it, otherwise plan on access occurring only at the endpoints which are 200 miles away from each other. Wouldn't it be good to know that an application was denied an award because someone said they had fiber in the area, but none of these other conditions were known? It would be disheartening to also find that along that 200 mile route there were a dozen rural communities who would sure like for economic development opportunities to thrive in their town, but if they pin their hopes on this one incumbent's middle mile system, without knowing all the other baggage associated with it, they could be in a bad situation if stimulus passes them by. That is the case today. Larger carriers have ascertained that they have provided the federal agencies with state maps that are "representative samples" of areas where an application overlaps with their existing broadband deployment. Therefore, the very entities who would provide the mapping data that RUS and NTIA require are the very entities who really don't want it known that they are putting up a misleading front. In Missouri, a new service provider cannot get access to dark fiber if they need it for their own proprietary systems. It doesn't matter how many maps are provided by incumbents to mapping contractors, the fact is that those types of networks do not exist. Yes, plant exists, but it is not available. Obtaining this information during a mapping process will be very difficult.

## IX. Middle Mile vs. Last Mile

The requirement to submit data on census block level in order to delineate the proposed funded service area was burdensome if you were a middle mile provider. Consider applying for 2,500 miles of middle mile fiber and having to draw service areas around all the territories which could potentially be impacted by that type of network. Fiber optic backbone cable will impact a much larger area than just a 10' easement along a county road. The potential impact of a middle mile network extends into far reaching areas if a middle mile microwave service provider comes along and taps the fiber along the way to extend their services. Or, if other middle mile fiber providers wish to connect into the applicant's open access system in order to close a ring on their part so their system becomes more stable and reliable. The problem with the middle mile and the way the census blocks were used is that it raises red flags to other existing service providers who could be 5 miles away from the proposed route, but they still protest because census block data was identified. As an example, if a middle mile applicant proposes to run fiber from Virginia to Florida, that route can ultimately have a positive influence on three other states in-between. How does the applicant take this into account when it comes time to list the census blocks impacted? For last mile, the census block data makes much more sense. But middle mile is a much broader scope and therefore needs a more streamlined method in order to explain its impact territorially.

The applicant of a middle mile proposal should be able to provide route maps for the proposed construction. Those routes should already be verified whether the routes will actually work or not. If an applicant proposes to build along state easements, does the state have the authority to grant a telecom easement in their corridor? If they are building aerial attached to power poles, does the applicant have permission and does the owner of the poles have the rights to allow for said attachments? If this type of data can be shown for middle mile, then the block census data would be more of a requirement for last mile providers. It needs to be assumed that middle mile networks are being installed to accommodate the last mile providers. So, route maps, build data, access points, interconnection points, geographical crossings, street data, construction method data, conduit placement, building placement, topology and architecture need to be submitted along with focused targets on which the build will ultimately benefit. The focused targets will help streamline and draw attention to the intended customer base without taking away the fact that middle mile backbone networks ultimately impact everyone. When comparing an applicant's middle mile proposal against incumbents or existing service providers, it needs to be determined if the incumbent actually has any facilities left and are they required to provide neutral, open access service.

## X. Open to the Public

Permit greater access, consistent with applicable Federal laws and regulations, which would provide total disclosure of all applications to policymakers and the public. People want to know how their tax dollars could be put to work for them. Cooperatives work well because members, the owners, have a voice. The United States works well because members, the owners, have a voice. When it comes to broadband deployment, every member of the public has an interest in how this plays out.

The smart grid has become a common household term because members of the public are concerned about energy conservation, electric rates, and the impact on the environment. Because they are concerned, they get involved. It's that genuine concern and involvement which is what gets people informed and through their voice, leadership is found. Making public the information gathered in the applications can also help serve as a filter. Those who do not support the initiative of our Federal government, who focus on protectionism and monopolize service territories, who do not conform to "open access" and choice, will most likely not submit an application because they have control issues and do not want to share information publicly. On the other hand, those who want to see a successful program that accomplishes what it started, that creates new jobs by creating new infrastructure which enables competitive service providers who truly want to reach outside their own box and expand into areas bringing help to the less fortunate underserved and unserved rural areas of America, will have no problem in making their plans known to the public. Even more so, it's likely that those applicants who believe they can make a difference even encourage and seek the support of the public. The network, after all, is made possible for the public and by the public.

Definitely make the details of the project, such as route maps, building sites, tower locations, and pertinent other specifications known and open to the public. Make it so that the public will not contact RUS or NTIA directly on the applications, but instead can make comments known to the applicant. This already happens somewhat by even the limited visibility the public already has on the applicants. They get a contact name and inquire and the applicant either shares or it doesn't. Again, those who are guided by this process and committed to its success will take into account the public opinion and keep them informed. So, gain some public support by making the applications open and accessible just like the networks themselves are intended to be.

## XI. Review Panel

We're concerned with the idea that those deciding the fate of whether broadband comes to these parts of rural America really know much about these parts. The dispersion method of the Smart Grid Initiative Grant funds is hopefully not the guiding principle when it comes to broadband. In that process we saw some states hit it big while others didn't do so good. So when it comes to distributing funds for the deployment of broadband infrastructure, we hope that someone is looking out for us here at home.

Therefore, how would it be if the states were able to provide a team member for final review of applications submitted in that particular state just prior to award? The industry experts serving on the three member panels probably understand the technical issues of whether fiber is more capable than wireless, but do they know which one works better in a particular area or if the area proposed by an applicant already uses one over the other? A state representative looking at applications from that state can help. They would be able to answer whether middle mile or last mile is more prominent. It might be that there are many last mile providers trying to serve a single community only to find out that there's only one path in and out which is not very robust or reliable should that path fail. It's called a communications blackout and can be as devastating as a power blackout. That's when an alternate middle mile is warranted. Or, there may be a place where it's the most remote of all, but for some reason it's an all carriers crossroads because of how they've installed their systems, but yet no one has provided any access for the residents of that area, which might be sparser than an urban setting, but could warrant a last mile installation scenario. Not sure someone unfamiliar with the surroundings would know this.

To rely on unpaid experts as reviewers is not really keeping in line with the whole premise that the ARRA was to promote job creation. It seems like a missed opportunity to not find people who could earn and probably need an income who could also contribute in one of our country's largest collaborated efforts to extend broadband to those who need it the most. We're missing the point of putting people back to work if we don't even let them help with the process of putting people back to work.

Staffing up with a larger work force and focused on specific areas, might help the process go smoother, quicker and with better results on the awards. We need to get people working quicker than the current process has allowed, but not at the risk of poor judgment either. That's where a state rep on the review panel could have a huge impact.

## XII. Targets

The target is set. It's the expedition of what's already the course for broadband, and that's to get it everywhere and quickly. The middle mile versus last mile components have already been addressed, but which comes first, the chicken or the egg? Without a sustainable, securable, reliable, affordable, expandable, deliverable and accessible backbone, the rural networks cannot reach their potential and we miss the larger target. The larger target is to stimulate long term economic growth and opportunity. For instance, without highways to get to country roads, where would country roads take us? Without electrical transmission lines, what good are the distribution lines if there's no way to get the source to the end user? Without the airports, what good are the planes? Broadband telecom follows the same principle. It doesn't do any good for a disaster recovery server farm to locate anywhere in rural America, if a data pipe doesn't exist to connect it to where it needs to go. It doesn't do a trucking company any good to locate a terminal in rural America if it can't get the communications it needs to connect with other terminals and suppliers elsewhere. The examples can go on and on and cellular/wireless has been helping to bridge the divide, but they too need the "chicken" in order to connect their towers to a backbone capable of meeting their dynamic industry needs. In rural America, do these backbone exist which can enable all this? Incumbents say "yes". The end user says "no".

If the target is the foundation which all other systems can be built upon, it will become like a field of dreams. Build up these rural communities with the right tools and watch them flourish. Allocate portions of remaining funds to specific population groups like farmers. Farmers' children attend rural schools. Funding for rural schools should be a target. Those rural schools need rural medical clinics, pharmacies and rural law enforcement to help take care and protect, so those should be targets. Transportation and road conditions are critical for the safe transport of those farmer's children to their schools and activities so targeting a network which supports the DOT efforts are important. Yes, there's a whole world of activities taking place in the farmlands and rural areas of America, but for it to survive, it will have to become a target of something which can sustain it, and broadband can do that. The problem is some say it's too expensive. Others say these areas are already served. Which is it? The answer is found in the people who are trying to make a life for their families in these rural areas. Don't ask the businesses who think they're providing a service, ask the people if they are being served. Their two word answer will most likely be, "help, please".

### XIII. Questions

- Will reimbursement payments be prorated over the 36 month project or as receipts are submitted? For example, if the 36 month project can be completed in 12, will all the funds be accessible?
- Can the purchase of all equipment be done at once with a single reimbursement, or does it need to be spread out?
- If a higher count fiber cable can be installed for the same amount of money requested in the application, can the higher count be used?
- What if the overall mileage comes in less than what was submitted in the application? Can more miles of network be added at that time?
- What if the cost per mile comes in less than what was submitted in the application? Can more miles of network be added at that time?
- Can tower locations (i.e. towns) be changed during the construction phase if needed?
- Can the size of buildings specified in the application be altered once construction commences?
- How are the nationwide environmental rules going to be enforced or adapted to accommodate all the builds required in each different state? The environmental reporting can have a huge impact on the timing for all construction projects.
- Are there any restrictions in how the assets are used once complete?